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DRUMMED HF RESIDUE/ASSOCIATED STORAGE AREAS NORTHWEST OF PLANT 4 CLOSURE PLAN INFORMATION AND DATA NOTICE OF DEFICIENCIES

06/24/93

DOE-2307-93
DOE-FN/OEPA
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RESPONSES

Department of Energy
Fernald Environmental Management Project
P.O. Box 398705
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JUN 24 1993

DOE-2307-93

Ohio Environmental Protection Agency
Division of Hazardous Waste Management
Attn: Mr. Tom Crepeau, Manager
Data Management Section
P.O. Box 1049
Columbus, Ohio 43266-0149

Subject: **DRUMMED HF RESIDUE/ASSOCIATED STORAGE AREAS NORTHWEST OF PLANT 4 CLOSURE PLAN INFORMATION AND DATA NOTICE OF DEFICIENCIES**

Reference: Letter, Ohio EPA to U.S. DOE-FEMP, Donald R. Schregardus to W. D. Adams, OH6 890 008 976, 05-31-0681, May 24, 1993.

Dear Mr. Crepeau:

This letter and attachments are in response to the Notice of Deficiencies (NOD) for the Drummed HF Residue/Associated Storage Areas Northwest of Plant 4 Closure Plan Information and Data as identified in the above referenced letter.

The plan and comments attached are specific to the closure of HMWU No. 7 and reflect the approach of the Fernald Environmental Management Project (FEMP) to RCRA/CERCLA integration at the time the CPID was submitted to the agency (October, 1992). Since that time, a new approach to RCRA/CERCLA integration has been initiated at the FEMP.

The comments and responses to NODs are provided in Attachment 1. Ohio EPA comments are in italics followed by the FEMP responses. The responses provided in Attachment 1 have been incorporated into Revision 1 of the Closure Plan Information and Data (see Attachment 2). In addition to the comments made by Ohio EPA, Section 2.2 of the CPID has been revised to include radiological characterization information based on the requirements of Section 4 of the Sampling and Analysis Plan.

If you or your staff have any questions concerning the discussions in this letter, our point of contact is John M. Sattler at (513) 648-3145.

Sincerely,

Ray Hansen

Raymond J. Hansen
Acting Manager

Enclosure: As Stated

cc w/ enc:

K. A. Chaney, EM-424 TREV
G. E. Mitchell, OEPA-Dayton
P. D. Pardi, OEPA-Dayton
D. R. Schregardus, Director, OEPA
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cc w/o enc:

K. L. Alkema, FERMCO
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J. T. Curtis, FERMCO
D. A. Howe, FERMCO, RCRA Operating Record
N. L. Redmon, FERMCO, RCRA Closure Files
Administrative Record

ATTACHMENT 1
DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
RESPONSES TO OEPA NOTICE OF DEFICIENCIES (OH6 890 008 976)
FOR
HAZARDOUS WASTE MANAGEMENT UNIT #7
DRUMMED HF RESIDUE/ASSOCIATED STORAGE AREAS NW OF PLANT 4

OEPA General Comment:

The closure plan indicates that Ph and fluoride are the only contaminants of concern. DOE-FEMP must provide additional justification that these two analytes are the only contaminants that could have resulted from storage of the drummed HF residues. Specifically, Ohio EPA requires further information regarding characterization of the anhydrous hydrofluoric acid (AHF) residues through either process knowledge or analytical methods (see specific comment #2).

FEMP Response:

The waste characterization was based upon process knowledge. EP Toxicity data was included in the evaluation of process knowledge. Based on this information, the wastes were declared hazardous as residues of a listed commercial chemical product generated from the clean out of the AHF product tank and was declared to be a listed waste, EPA Waste Number U134. The EP Toxicity data (see Attached), indicated that the wastes are not characteristically hazardous for TCLP metals or corrosivity. As a result, fluorides were selected as a degradation product and Ph was selected as a potential indicator parameter for the partially neutralized residues.

OEPA Specific Comments:

1. *Section 2.1, Page 6 - The closure plan indicates that photographs were utilized in determining the boundaries of HWMU #7 but fails to provide a copy of them. Please amend the closure plan to include a copy of these photographs. This information must be provided in accordance with OAC 3745-66-12(B)(2).*

FEMP Response:

Referenced photographs have been included in the Revised CPID. Section 2.1 will be revised as follows:

The boundaries of HWMU No. 7 were delineated based on photos (SEE ATTACHMENT C) and interviews with personnel that worked in the area.

OEPA Specific Comments:

2. *Section 2.2, Page 7 - The plan states that in January of 1990 analytical performed on the AHF waste residues demonstrated that the waste was not found to be hazardous based upon the characteristics for RCRA corrosivity or toxicity. Please provide a copy of these analytical results with the revised closure plan. This information must be provided in accordance with OAC 3745-66-12(B)(3).*

FEMP Response:

Analytical data sheets (EP Toxicity metals and Ph) used to assist in the waste characterization will be provided (see also response to general comment). Section 2.2 of the CPID will be revised as follows:

In January 1990, the AHF waste residues were determined to be nonhazardous because they were not characteristic for RCRA corrosivity or toxicity under OAC 3745-51-20 to 3745-51-24 and (40 CFR 261.20 to 261.24). THIS DETERMINATION WAS BASED ON PROCESS KNOWLEDGE AND AN EVALUATION OF EP TOXICITY ANALYTICAL RESULTS. A COPY OF THE ANALYTICAL RESULTS IS PROVIDED IN ATTACHMENT D.

OEPA Specific Comments:

3. *Section 3.1.1, Page 11 - The closure plan makes reference to the FEMP Improved Storage of Soil and Debris Removal Action #17 Work Plan. Since a RCRA closure plan is to be viewed as stand-alone document, DOE-FEMP must revise the closure plan to include a description of how the soils will be removed and managed in accordance with the referenced plan. This information must be provided in accordance with OAC 3745-66-12(B)(4) and OAC 3745-66-14.*

FEMP Response:

The following discussions will be included in Section 1.3.2 and referenced in Sections 2 and 3:

CHARACTERIZATION OF MEDIA CONTAMINATION ON A SITE-WIDE BASIS IS BEING EVALUATED UNDER THE OU5 RI/FS. THE FINAL CLEAN UP LEVELS WILL BE DETERMINED THROUGH THE CERCLA PROCESS. UNTIL THE FINAL REMEDIATION UNDER THE ROD FOR OU5, REMOVAL ACTION NO. 17 PROVIDES FOR THE IMPROVED MANAGEMENT OF SOIL AND DEBRIS.

BASED ON APPROVALS FROM BOTH THE OEPA AND USEPA, REMOVAL ACTION NO. 17 IS BEING IMPLEMENTED IN TWO PHASES. PHASE I ENCOMPASSES SOIL AND DEBRIS MANAGEMENT DURING THE DESIGN AND CONSTRUCTION OF FOUR PROPOSED STORAGE FACILITIES. PHASE II ADDRESSES SOIL AND DEBRIS MANAGEMENT FROM THE TIME THE FACILITIES ARE CONSTRUCTED UNTIL FINAL REMEDIAL ALTERNATIVES FOR FEMP ARE SELECTED. REMOVAL ACTION NO. 17 PROVIDES SPECIFIC CRITERIA (LESS THAN OR EQUAL TO 100 PCI/G TOTAL URANIUM, 50 PCI/G TOTAL THORIUM, 5 PCI/G TOTAL RADIUM) FOR THE MANAGEMENT OF SOIL AND DEBRIS CONTAMINATION AND IDENTIFIES OPTIONS INCLUDING STORAGE IN CONTROLLED STOCKPILES OR AN IMPROVED STORAGE FACILITY. IF CONTAMINATED SOIL IS IDENTIFIED DURING THE CLOSURE OF A HWMU, IT WILL BE MANAGED IN ACCORDANCE WITH REMOVAL ACTION NO. 17.

Section 3.1.1 will be revised to read as follows:

Samples of the soil underlying HWMU No. 7 and in other ~~production area~~ background sampling locations around Plant 4 will be collected and analyzed for Ph and total fluoride (see Figure 6 for background sampling locations). If the sample analyses indicate that fluoride concentration is significantly higher or Ph is significantly lower than the levels determined by THE PLANT 4 production area background samples IDENTIFIED IN THIS CPID, FEMP will remove up to 6 inches of soil from those grid locations within HWMU No. 7 where contamination is indicated by sample analysis.

CONSISTENT WITH REMOVAL ACTION NO. 17 (SEE DISCUSSIONS IN SECTION 1.3.2), SOILS REMOVED (IF FOUND CONTAMINATED) WILL BE BOXED AND STORED IN A RCRA

STORAGE AREA (ONE OF THE STORAGE LOCATIONS LISTED IN THE PART B PERMIT APPLICATION) OR STORED IN A CONTROLLED STORAGE BUILDING (TO BE CONSTRUCTED UNDER PHASE II OF REMOVAL ACTION NO. 17). ~~Removal and management of contaminated soil will be in accordance with the current revision of the FEMP Improved Storage of Soil and Debris Removal Action # 17 Work Plan. However, if~~

IF completion of closure requires removal of more than 6 inches of soil from the contaminated grids, revised CPID will be prepared to discuss the need for additional clean up actions ~~and~~. THE REVISED CPID WILL provide the supporting information necessary to determine if any FURTHER actions should be taken prior to the final ~~Remedial Action(s)~~ REMEDIATION OF CONTAMINATED SOILS FOLLOWING THE ROD FOR OU5 OR OU3, CONSISTENT WITH THE CLEAN UP CRITERIA ESTABLISHED BY THE ROD FOR OU5. ~~under the applicable ROD~~.

It should be understood that limited removal of soils proposed to achieve RCRA closure, is specific to HWMU No. 7.

OEPA Specific Comments:

4. *Section 3.2.1, Page 12 & 13, Item 2 - The closure plan states that samples will be taken at 0 to 6 inches and at 12 to 18 inches in order to characterize potential soil contamination. If contamination is found in the 0 to 6 inch samples but not in the 12 to 18 inch sample, DOE-FEMP will not be able to verify that contamination does not exist in the 6 to 12 inch zone given the sampling plan provided. Modify the closure plan to address possible contamination in the 6 to 12 inch layer. This revision must also be made to the Sampling and Analysis Plan. This information must be provided in accordance with OAC 3745-66-12(B)(4) and OAC 3745-66-14.*

FEMP Response:

The FEMP will collect samples at the 6 to 12 inch depth for all 12 sample locations. Section 3.2.1 will be modified as follows:

2) Soil samples from beneath HWMU No. 7 (as defined in Section 2.1 and Figure 5) will be collected. Soil samples will consist of twelve (12) sets of

soil samples (providing a total of 36 ~~24~~ soil samples) taken within the storage unit. The twelve (12) sample locations identified are shown in the sampling grids shown in Figure 5. Each set of soil samples at a location will consist of three (3) ~~two (2)~~ soil samples, each taken as a grab ~~composite~~ sample at two distinct depths. The sampling depths are 0 to 6 inches, 6 TO 12 INCHES, and 12 to 18 inches. One (1) duplicate set of samples (i.e., a total of 2 samples) will be collected from the soil underlying the unit. All samples will be collected following the procedures in the SAP (Attachment A).

Section 2.2 of the Sampling and Analysis Plan will be revised as follows:

1) Soil samples from beneath HWMU No. 7 (as defined in Section 2.1 of the CPID) will be collected. Soil samples will consist of twelve (12) sets of soil samples (providing a total of 36 ~~24~~ soil samples) taken within the storage unit. The twelve (12) sample locations identified are shown in the sampling grids in Figure 5. Each set of soil samples at a location will consist of three (3) ~~two (2)~~ soil samples, each taken as a grab ~~composite~~ sample at two distinct depths. The sampling depths are 0 to 6 inches, 6 TO 12 INCHES, and 12 to 18 inches. One (1) duplicate set of samples (i.e., a total of 2 samples) will be collected from the soil underlying the unit. All samples will be collected following the procedures in the SAP (Attachment A).

OEPA Specific Comments:

5. *Section 3.2.1, Page 13, Item 2 & 3 - The closure plan indicates that the samples taken within the hazardous waste management unit are "grab composite" samples. The description of the sampling strategy indicates that these are actually grab samples. Please revise the closure plan to indicate that the samples to be taken are grab samples. This revision must also be made to the Sampling and Analysis Plan. This information must be provided in accordance with OAC 3745-66-12(B)(4).*

FEMP Response:

The wording will be changed. See response to comment #4 for revised text.

OEPA Specific Comments:

6. *Section 3.2.1, Page 13 - The closure plan states that wastes generated during closure of HWMU #7 will be containerized and managed in an appropriate "suspect hazardous waste storage location". The plan, however, fails to define a "suspect hazardous waste storage location". Please revise the closure plan to clearly identify where the wastes will be stored pending analysis. This information must be provided in accordance with OAC 3745-66-14 and OAC 3745-66-12(B)(4).*

FEMP Response:

The wording will be changed to read:

IF CONTAMINATED SOIL IS REMOVED PER SECTION 3.1.1 OF THE CPID, IT WILL BE BOXED AND STORED IN ONE OF THE RCRA STORAGE AREAS IDENTIFIED IN THE PART B PERMIT APPLICATION OR PLACED IN A TEMPORARY PILE ADJACENT TO THE EXCAVATION. IN ACCORDANCE WITH REMOVAL ACTION NO. 17, THE TEMPORARY PILE WILL BE PLACED ONTO A PLASTIC LINER AND COVERED WITH PLASTIC TO CONTROL RUN-ON AND RUN-OFF (ALSO SEE SECTION 1.3.2). ~~All wastes generated during closure of the unit will be containerized and managed in an appropriate suspect hazardous waste storage location pending wWaste~~ characterization and determination WILL BE CONDUCTED in accordance with the approved FMPC Waste Analysis and Waste Determination Plans.

OEPA Specific Comments:

7. *Section 5.0, Page 18 - The closure plan schedule indicates that closure activities would not be completed within 180 days of Ohio EPA approval of the plan. DOE-FEMP must remove the extra time period from the closure schedule or supply justification for the extension. The Ohio EPA would not normally consider internal administrative activities sufficient cause for an extension. This information must be provided in accordance with OAC 3745-66-13(B).*

FEMP Response:

Section 5 will be revised as follows:

CLOSURE OF HWMU NO. 7 WILL BE INITIATED ON THE DATE THAT THE FEMP RECEIVES THE OEPA APPROVAL OF THIS CPID. ASSUMING NO MODIFICATIONS TO THE PLAN ARE REQUIRED OR UNEXPECTED EVENTS ARE ENCOUNTERED, IT IS EXPECTED THAT CLOSURE ACTIVITIES CAN BE COMPLETED WITHIN 180 DAYS FROM THE DATE FEMP RECEIVES APPROVAL OF THE CPID. THE SCHEDULE IS ILLUSTRATED IN FIGURE 4. CLOSURE CERTIFICATION WILL BE SUBMITTED WITHIN 60 DAYS OF COMPLETION. IF UNEXPECTED EVENTS ARISE OR CLEAN CLOSURE CANNOT BE ACHIEVED, A REVISED CPID WILL BE SUBMITTED WITHIN 30 DAYS OF THAT DETERMINATION.

THE SCHEDULE DOES NOT ANTICIPATE UNEXPECTED EVENTS SUCH AS ADVERSE WEATHER, SAMPLES LOST OR DAMAGED IN SHIPMENT, OR INVALIDATED DATA DUE TO THE ANALYTICAL LABORATORY EXCEEDING SAMPLE HOLDING TIMES. IF NECESSARY, A REQUEST WITH JUSTIFICATIONS FOR AN EXTENSION OF THE TIME REQUIRED FOR COMPLETION OF ACTIVITIES WILL BE SUBMITTED TO THE AGENCY IN ACCORDANCE WITH OAC 3745-66-13(A) AND OAC 3745-66-13(B) [40 CFR 265.113(A) AND 40 CFR 265.113(B)]. THE OEPA AND AN INDEPENDENT, QUALIFIED, REGISTERED PROFESSIONAL ENGINEER WILL BE NOTIFIED AT LEAST FIVE (5) BUSINESS DAYS BEFORE CRITICAL ACTIVITIES BEGIN (SEE FIGURE 4).

~~Prior to initiating a project at the FEMP, documentation required for compliance with the National Environmental Policy Act (NEPA) must be completed and approved. In addition, to comply with DOE orders, several internal FEMP procedures must be prepared, reviewed, approved, and implemented. Examples of the DOE project specific requirements are:~~

- ~~Operational Readiness Reviews~~
- ~~Site Work Plans~~
- ~~Radiological and Chemical Health and Safety Risk Assessments~~
- ~~Health and Safety Plans~~
- ~~Worker Training Plans and Instruction~~

~~Internal FEMP NEPA and DOE compliance activities require up to 180 days to complete and are initiated concurrently with the submittal of the Closure Plan Information and Data. However, before NEPA and DOE compliance~~

~~requirements can be completed, the final requirements and specifications of the OEPA approved Closure Plan Information and Data must be defined and incorporated.~~

~~Upon receipt of approval of the Closure Plan Information and Data for HWMU No. 7, the FEMP will complete the remaining NEPA and DOE compliance requirements. Assuming no modifications to the plan are required, closure activities will be completed within 240 days from the start of closure activities and closure will be certified within 60 days after completion of closure. The FEMP will notify the OEPA and PE at least 45 days prior to the date on which closure activities will begin. It is anticipated that the 45 day notice can be provided when OEPA approval is received. If more time is required to complete NEPA and DOE compliance documentation and activities, a revised schedule will be submitted to the OEPA. Figure 7 shows the anticipated schedule for closure of HWMU No. 7.~~

~~The OEPA and the registered PE will be notified at least five (5) business days in advance of significant activities conducted pursuant to closure of the unit. Significant activities include unit inspections, soil sampling of the unit and other QA/QC sampling activities to support verification of cleanup.~~

OEPA Specific Comments:

8. *SAP, Section 2.2, Page A-4 - Background sampling locations have been chosen at 12 locations surrounding Plant 4. DOE-FEMP must provide further information to justify these sampling points. Specifically, DOE-FEMP must demonstrate that sample locations utilized for establishing site background conditions haven't been affected by hazardous waste management activities associated with Plant 4. Please revise the closure plan to include specific process information relating to Plant 4. The information should include the location of product storage areas and a description of any activities that would influence the amount of contamination due to operational losses around this building. This information must be provided in accordance with OAC 3745-66-12(B)(4) and OAC 3745-66-14.*

FEMP Response:

Spill and material storage records have been reviewed and the areas adjacent to the proposed sample locations inspected to confirm there are no records or visual evidence of contamination in the proposed Plant 4 background sample locations. Pictures of the sample locations have been taken and included in the revised CPID document to support the determination that the sample locations are not impacted by inventory storage area and spills.

The following text will be added to Section 1.2 of the CPID.

PLANT 4, ALSO KNOWN AS THE GREEN SALT PLANT, PERFORMED THREE PRINCIPAL OPERATIONS IN THE OVERALL PROCESS OF PRODUCING URANIUM METAL AT THE FEMP. THE THREE OPERATIONS PERFORMED IN PLANT 4 WERE THE CONVERSION OF ORANGE OXIDE (UT_3) TO URANIUM TETRAFLUORIDE (UF_4, ALSO KNOWN AS "GREEN SALT"); THE BLENDING AND PACKAGING OF DEPLETED GREEN SALT FOR THE METALS PRODUCTION PLANT; AND THE OPERATION OF THE TANK FARM TO SUPPLY PRODUCTION PLANTS WITH BULK QUANTITIES OF REQUIRED LIQUID CHEMICAL COMPOUNDS.

THE UT_3 FOR CONVERSION TO UF_4 WAS EITHER PRODUCED IN PLANT 2/3 OR RECYCLED FROM DOE REACTOR SITES. UT_3 WAS CONVERTED TO URANIUM DIOXIDE (UT_2 OR BROWN OXIDE) BY REDUCTION WITH HYDROGEN. THE UT_2 THEN REACTED WITH ANHYDROUS HYDROGEN FLUORIDE TO FORM UF_4.

GREEN SALT PRODUCTION WAS A TWO-STEP PROCESS IN WHICH UT_3 WAS REACTED WITH DISSOCIATED URANIUM TO FORM UT_2. THE UT_2 WAS THEN HYDROFLUORINATED IN A REACTION WITH ANHYDROUS HYDROFLUORIC ACID (AHF) TO FORM UF_4. UT_3 RECYCLED FROM DOE REACTOR SITES WOULD UNDERGO DOUBLE PASS PROCESSING TO ACHIEVE HIGH YIELDS OF PRODUCT UF_4. THE UF_4 PRODUCT WAS THEN WEIGHED, BLENDED, SAMPLED FOR CHEMICAL ANALYSIS, PACKAGED IN 10-GALLON CANS AND SHIPPED TO PLANT 5 WHERE THE GREEN SALT WAS MIXED WITH MAGNESIUM TO PRODUCE URANIUM METAL DERBIES IN A FURNACE REDUCTION PROCESS.

THE TANK FARM AREA FACILITIES PROVIDED FOR UNLOADING, STORING AND TRANSFERRING ACIDS, BASIC SOLUTIONS AND SOLVENTS THROUGHOUT THE FEMP. FACILITIES WERE ALSO PROVIDED FOR STORING AND UNLOADING BY-PRODUCT HF

SOLUTION AND FOR MANUFACTURING AMMONIUM HYDROXIDE FROM ANHYDROUS AMMONIA.

The following text will be added to Section 3.1.1 of the CPID:

TO ENSURE THAT SAMPLES TAKEN IN THE PLANT 4 AREA ACCURATELY REPRESENT SITE BACKGROUND CONDITIONS, THE AREAS SURROUNDING PLANT 4 WERE INSPECTED FOR STAINS THAT MAY INDICATE ELEVATED LEVELS OF RADIOLOGICAL AND/OR CHEMICAL CONTAMINATION. PHOTOGRAPHS OF THE AREAS TO BE SAMPLED AROUND PLANT 4 ARE INCLUDED IN ATTACHMENT E. ADDITIONALLY, FEMP SPILL RECORDS WERE SEARCHED AND NO SPILLS WERE FOUND THAT WOULD INFLUENCE BACKGROUND SAMPLING RESULTS IN THE PLANT 4 AREA. EXISTING RECORDS ALSO SHOW NO EVIDENCE OF HAZARDOUS WASTE STORAGE IN THE PLANT 4 AREA WITH THE EXCEPTION OF HWMU NO 7.

OEPA Specific Comments:

9. *SAP, Section 2.2.1, Page A-5 - DOE-FEMP must revise the closure plan to indicate that sampling will be directed toward areas of visible contamination if they are evident. This information must be provided in accordance with OAC 3745-66-12(B)(4).*

FEMP Response:

There are no areas of visible contamination within the HWMU. Thirty-six samples (i.e., 3 samples depths at 12 sample locations) in a 25 by 30 foot area are adequate to identify contamination.

OEPA Specific Comments:

10. *SAP, Section 2.4.2, Page A-9 - The closure plan does not provide sufficient information on the location of the equipment decontamination area and the control measures to be taken to control run-off. Please modify the closure plan to indicate the exact criteria that will determine if a location is protected from potential contamination. Also, supply detailed information on the containment dike (i. e. material of construction, dimensions, criteria for determining need for a containment dike). This information must be provided in accordance with OAC 3745-66-12(B)(5).*

FEMP Response:

The wording used was generic; no known sources of contamination exist. The SAP will be modified to indicate the decontamination area will be located outside the HWMU and provided with temporary berms to prevent run-on and run-off. The revised text for Section 2.4.2 of the SAP follows:

1) Establish a decontamination area in a location OUTSIDE THE BOUNDARIES OF THE HWMU. ~~that is protected from potential contamination.~~ Use a double thickness of 6-mil polyethylene, or other approved impervious sheeting, to line the decontamination area. CONSTRUCT ~~As appropriate, construct~~ containment dikes for control of run-off.

OEPA Specific Comments:

11. *SAP, Section 2.4.2, Page A-10, Item 7 - The process for decontamination of sampling equipment indicates that an acid and a solvent rinse will be used. Please supply justification that these rinses are needed to ensure equipment decontamination. If it is determined that the acid and solvent rinse are required, revise the closure plan to include provisions for the proper characterization and management of the wastes that would be generated during the decontamination process. This information must be provided in accordance with OAC 3745-66-12(B)(4).*

FEMP Response:

The sample equipment decontamination specified is the procedure required in the FEMP CERCLA Sitewide Quality Assurance Project Plan (SCQ). To avoid RCRA listed waste issues, no listed solvents will be used. To avoid generation of listed solvent wastes, the SAP will be revised to indicate solvent rinse with ethanol not methanol. The plan already calls for neutralization of the rinseates containing acid residues. The SAP will be modified to include field pH measurements to confirm that base neutralization eliminates concerns for corrosivity characteristics. Section 2.4.2 of the SAP will be modified as follows:

7) Rinse with a dilute acid solution. (NOTE: Residual acids in used rinse

solutions will be neutralized TO A pH GREATER THAN 2. THE pH OF THE NEUTRALIZED SOLUTION WILL BE VERIFIED WITH IN THE FIELD BEFORE DISPOSAL.)

8) Rinse with potable water.

9) Rinse with a solvent solution THAT WILL NOT GENERATE A RCRA LISTED WASTE (i.e., ETHANOL). ~~methanol).~~

OEPA Specific Comments:

12. *SAP, Section 4.1, Page A-15 - The closure plan fails to list the clean levels for the final rinseate of sampling equipment. Please revise the closure plan to indicate that the pH should be between 2.0 and 12.5 and fluorides concentrations should be < 1 mg/l before decontamination is deemed effective. This information must be provided in accordance with OAC 3745-66-12(B)(4).*

FEMP Response:

Decontamination action levels will be added in Section 4.1 of the SAP as follows:

To prevent cross-contamination between samples and locations, only clean or decontaminated sampling equipment will be used. When sampling equipment is decontaminated following collection of a sample, a sample of the final rinseate will be collected and analyzed for pH and total fluorides. Analysis of these samples will be used to confirm that decontamination was effective. DECONTAMINATION EFFECTIVENESS WILL BE EVALUATED PER THE DECONTAMINATION ACTION LEVELS SPECIFIED IN TABLE B-1. One (1) sample of the final rinseate from sampling equipment decontamination will be collected each day sampling is conducted using the following procedure: